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Keynote Luncheon Address I

James W. Spence

Al Monaco

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KEYNOTE LUNCHEON ADDRESS I

Introduction - James W. Spence
Speaker - Al Monaco

INTRODUCTION

MR. SPENCE: Good afternoon. My name is Jamie Spence.¹ I am a partner in the Toronto office of Dickinson Wright. I have the pleasure today to introduce our keynote luncheon speaker, Mr. Al Monaco.² Al is President of Gas Pipelines, Green Energy & International for Enbridge, Inc. out of Calgary. His business unit is responsible for the operation and growth of Enbridge Gas Pipelines, including its gas gathering and processing operations in the United States, the Gulf Coast offshore assets, and Enbridge's investment in Alliance Factor in Osavo. Al also has responsibility for Enbridge's green power generation in North America, its energy marketing business, international business development, and investment activities.

Al earned a Master of Business Administration in Finance from the School of Business at the University of Calgary. He holds a Certified Management Accounting designation and is a member of the Society of Management Accountants of Alberta. Al recently completed the Advanced Management Program at Harvard.

Please welcome Al Monaco.

KEYNOTE ADDRESS

MR. MONACO: When I was asked to speak at this Conference, it literally took me about three seconds to say "yes," partly because Enbridge is an important player in the energy equation on both sides of the border. But it is also because I truly find the Canada-United States relationship to be a fascinating one. It is unique on many levels, and I really do enjoy talking and speaking with Canadians and Americans about it.

¹ *James Spence—Biography*, DICKINSON WRIGHT, <http://www.dickinson-wright.com/ourpeople/pages/person.aspx?person=6d5b8a77-4b67-4450-9989-3ad4483fb1d4> (last visited Jan. 12, 2012).

² *Al Monaco—Biography*, ENBRIDGE, <http://www.enbridge.com/InvestorRelations/CorporateGovernance/ExecutiveManagement/Al-Monaco.aspx> (last visited Nov. 4, 2011).

Recent developments in the Middle East and North Africa have shown the volatility of oil supply and oil prices. This reinforces that the interconnect-edness of the Canada-United States energy system is really a strategic advantage to both nations.³ That interconnectedness shows up in the facts and figures of the energy trade. There are also, I think, some clouds lurking on the horizon here which are going to challenge the relationship going forward.

Now, I was not sure about slides today because it is a keynote address but when you are talking about energy, it is always useful to show a few maps to get a picture and a feel for the continental outlook here. I would like to focus my comments on the overall energy picture in North America from a corporate perspective. You have heard a lot of different perspectives here so far which have been very interesting. What I will do is discuss the importance of energy in our economy, the criticality of the resources that flow across the border, describe our company's role in that energy flow, and what we are doing to develop infrastructure that goes to the heart of energy security and economic growth. I will then wrap up with what I believe are a few important challenges and opportunities facing Canada and the United States in terms of policymakers and our industry.

I hope the main message, though, that I leave today is one that says the future growth and sustainability of our standard of living in North America depends on the strength of the Canada-United States energy relationship and that we need to manage and nurture that relationship going forward.

I am going to take a few minutes to discuss my personal view on how Canadians see themselves day to day, and the relationship that they have with the United States. Canadians might appreciate this. We will have to see about the Americans, but this is sort of how I look at this dynamic.

Believe it or not, some Canadians feel unsure about themselves in this relationship. In contrast, nobody questions that Canadians can speak up and be counted on. At times we differ with United States' positions—witness our cross-border issues around beef, softwood lumber, and so on⁴—but we usually work through those. We sometimes feel that Canada has a very small role or a smaller role anyway on the world stage compared to the United States. But we believe strongly in our values and we think we punch well above our weight when it comes to standing up for those values, in many

³ See generally NAT'L FOREIGN INTELLIGENCE BD., *GLOBAL TRENDS 2015: A DIALOGUE ABOUT THE FUTURE WITH NONGOVERNMENTAL EXPERTS* (Dec. 2000).

⁴ See *Softwood Lumber*, FOREIGN AFFAIRS & INT'L TRADE CAN., http://www.international.gc.ca/controlscontroles/softwoodbois_oeuvre/index.aspx?menu_id=19&menu=R&view=d (last visited Nov. 4, 2011); see also Panel Report, *United States – Final Dumping Determination on Softwood Lumber from Canada*, WT/DS264/RW (Apr. 3, 2006); see also *Canada-European Community – Beef Hormones*, FOREIGN AFFAIRS & INT'L TRADE CAN., http://www.international.gc.ca/trade-agreements-accords-commerciaux/disp-diff/update_hormones.aspx?lang=en&view=d (last visited Nov. 4, 2011).

cases right alongside our American friend. I would venture to say that most Canadians feel that their national sport, hockey, is much more exciting than baseball, basketball, or NASCAR, but we are too polite to even say that to an American.

Interestingly, when I speak to my United States friends and colleagues, they really have trouble understanding this whole dynamic I am talking about here—an inferiority complex that seems to be part of our psyche. It might have something to do with living alongside the five-thousand pound elephant which just happens to be the world's economic and military super power. So it has got to have some psychological effect at some point. And this will be the last psychoanalysis I am going to attempt during this conversation, especially for an accountant.

When it comes to energy, though, I am contrasting now that initial view to energy. We come all the way out of the shell and we believe Canada is second to none in terms of searching for, developing, and producing energy of all forms. We have the technical skills to develop these resources, although we are smart enough to know the benefits of the free flow of talents, technology, and capital across the border. Of course, as you see in the slide here, Canada has massive energy resources that position us to become an energy super power.⁵ Canada has the second largest proved reserves of crude oil at 178 billion barrels and the ultimate reserve potential is somewhere past 300 billion barrels.⁶

Now, in 2009, Canada provided ninety percent of all United States natural gas imports.⁷ We also share, as you know, an integrated electricity grid and supply virtually all of each others' electricity imports.⁸

Finally, on this point, over the last decade, as Canadians we have discovered, I think, what is a newfound confidence in that our economic model actually works. On that point, our banks weathered the financial collapse

⁵ Al Monaco, Enbridge, Presentation: Henry T. King, Jr. Annual Conference on Canada-United States Relations, Can.-U.S. L. Inst., at 5 (Apr. 15, 2011), *available at* http://cusli.org/conferences/annual/annual_2011/documents/Monaco%20-%20Lunch%20Presentation%20-%2020110413.pdf. See generally *Evaluation Reports 2011*, NAT'L RES. CAN., <http://www.nrcan.gc.ca/evaluation/reports/2011/2843> (last visited Nov. 4, 2011).

⁶ *Atlas of Canada, Crude Oil and Natural Gas Resources*, NAT'L RES. CAN., <http://atlas.nrcan.gc.ca/site/english/maps/economic/energy/oilgas/1/> (last visited Nov. 4, 2011). See also *Sustainable Development Strategy Moving Forward*, NAT'L RES. CAN., <http://www.nrcan.gc.ca/sustainable-development/strategy-2004/2671> (last visited Nov. 4, 2011).

⁷ *Canada – U.S. Energy Relations*, GOV'T OF CAN., http://www.canadainternational.gc.ca/washington/bilat_can/energy-energie.aspx?lang=eng (last visited Nov. 4, 2011).

⁸ *Id.*

very well.⁹ In fact, the World Economic Forum now ranks Canada as the strongest banking system in the world.¹⁰ The International Monetary Fund ranks Canada with the lowest debt to gross domestic product (“GDP”).¹¹ You can see that on the left there.¹² On the right, total employment has increased rapidly with most new jobs coming from full-time areas in high-wage industries.¹³

Canada no doubt then is in a strong position but the reality behind that is a lot of it has to do with our energy as a significant part of our economy. So that is my quick analysis on the Canadian psyche when it comes to our place in the world alongside the United States.

Energy is an important part of our economic engine, which means that the energy relationship between us is equally important. Trade between the two countries on energy totals \$88 billion.¹⁴ Canada exports two million barrels every day of crude oil to the United States and 330 billion cubic feet of natural gas monthly.¹⁵ Right here in Ohio, the biggest import from Canada is energy at \$4 billion.¹⁶ Oil sands investments over the next decade are going to be in the order of \$200 billion at least.¹⁷ That is actually a number that came to us as we were moving through the downturn. That is estimated to generate about 300,000 jobs in the United States through spin-off benefits¹⁸ and upwards of \$30 to \$40 billion in increased GDP in the United States over the next decade.¹⁹

⁹ CAN. CHAMBER OF COMMERCE, 2011-2012 Economic Outlook 1 (2011), available at http://www.chamber.ca/images/uploads/Reports/2010/Economic_Outlook_2011.pdf (last visited Nov. 4, 2011).

¹⁰ *World Economic Forum Ranks Canadian Banks Soundest in the World for the Third Consecutive Year*, DEP’T OF FIN. CAN., <http://www.fin.gc.ca/n10/10-078-eng.asp> (last visited Nov. 4, 2011).

¹¹ Monaco, *supra* note 5, at 6; see also *Report for Selected Countries and Subjects*, INT’L MONETARY FUND, http://www.imf.org/external/pubs/ft/weo/2010/02/weodata/weorept.aspx?pr.x=47&pr.y=10&sy=2010&ey=2011&scsm=1&ssd=1&sort=country&ds=.&br=1&c=156&s=GGXWDN_NGD P&grp=0&a= (last visited Nov. 4, 2011).

¹² Monaco, *supra* note 5, at 6.

¹³ *Id.*

¹⁴ See GOV’T OF CAN., *supra* note 7.

¹⁵ *Id.*

¹⁶ *Ohio*, GOV’T OF CAN., http://www.canadainternational.gc.ca/washington/commerce_can/2008/oh.aspx?lang=eng (last visited Nov. 4, 2011).

¹⁷ *Bruce March Imperial Oil on Canada’s Oil Sands*, CAN. COUNCIL OF CHIEF EXEC., <http://www.ceocouncil.ca/ceo-perspectives/bruce-march-imperial-oil-talks-strategic-importance-of-oil-sands-and-highlights-environmental-progress> (last visited Nov. 4, 2011).

¹⁸ *Canadian Oil Sands and U.S. Energy Supply*, H. ENERGY AND COMMERCE COMM., http://republicans.energycommerce.house.gov/Media/file/Hearings/Energy/021011_Middle_East/Mar.pdf (last visited Nov. 4, 2011).

¹⁹ *Id.*

Now I am going to turn to our role in the North American energy chain. I think we bring a unique continental perspective here as we are focused on both sides of the border. On the left top there, we operate the world's longest crude oil system and that puts through about two million barrels per day of crude.²⁰ On the right, we own Canada's largest gas utility with two million customers.²¹ Bottom left, we bring natural gas and gas products to the Chicago market.²² On the Gulf Coast, again on the bottom left, we have an extensive gathering and processing business which positions us to capitalize on the gas growth,²³ and I am going to touch on that one a little later on.

We also move about forty percent of offshore deep gas.²⁴ Finally, we recently added a new platform and that is on the bottom right, including wind, solar, and waste heat recovery.²⁵ There are environmental benefits of adding this platform, but the strategy is also driven by the need to sustain our earnings and growth in the longer term. In a way, this is a bit of a microcosm, I think, of my overall view on this in that we need to transition to green energy over time. You can see that that is a part of our strategy at Enbridge as well.²⁶

Now, this slide illustrates the sheer scale and scope of our liquids pipelines business connecting the growing Canadian supply with the very important United States path to refining market in the Midwest.²⁷ Now, I think I counted Keystone's name about seven or eight times, or maybe more, but we already move about seventy percent of all the crude oil out of Western Canada and Canada provides twenty-one percent of all United States imports.²⁸

²⁰ Monaco, *supra* note 5, at 8. *See generally* *Why Invest*, ENBRIDGE, <http://www.enbridge.com/InvestorRelations/WhyInvest.aspx> (last visited Nov. 4, 2011); *see also* *Our Pipelines*, ENBRIDGE, <http://www.enbridge.com/DeliveringEnergy/OurPipelines.aspx> (last visited Nov. 4, 2011).

²¹ Monaco, *supra* note 5, at 8. *See also* *Gas Distribution*, ENBRIDGE, <http://www.enbridge.com/DeliveringEnergy/GasDistribution.aspx> (last visited Nov. 4, 2011).

²² Monaco, *supra* note 5, at 8. *See also* *Our Pipelines*, ENBRIDGE, <http://www.enbridge.com/DeliveringEnergy/OurPipelines.aspx> (last visited Nov. 4, 2011).

²³ Monaco, *supra* note 5, at 8. *See generally* *Enbridge U.S. Operations – Gas Transportation*, ENBRIDGE, <http://www.enbridgeus.com/Main.aspx?id=234&tmi=344&tmt=4> (last visited Nov. 4, 2011).

²⁴ *See* ENBRIDGE, *Our Pipelines*, *supra* note 22.

²⁵ Monaco, *supra* note 5, at 8. *See generally* *Renewable Energy*, ENBRIDGE, <http://www.enbridge.com/DeliveringEnergy/Renewableenergy.aspx> (last visited Nov. 4, 2011).

²⁶ Monaco, *supra* note 5, at 8.

²⁷ *Id.* *See generally* *Liquid Pipelines*, ENBRIDGE, <http://www.enbridge.com/DeliveringEnergy/OurPipelines/LiquidsPipelines.aspx> (last visited Nov. 4, 2011); *see also* *Lakehead System*, ENBRIDGE, <http://www.enbridgeus.com/Main.aspx?id=210&tmi=210&tmt=1> (last visited Nov. 4, 2011).

²⁸ *See generally* ENBRIDGE, *Lakehead System*, *supra* note 27.

That is the most of any country.²⁹ That is very likely to grow because of a number of factors I will get into. In fact, the President recently reinforced the importance of security of supply and Canada's role in his recent statements.³⁰ I can assure you there were a lot of Canadians looking very carefully at his comments.

I want to briefly cover a project here that best exemplifies the power of the Canada-United States energy relationship. Corporately, we talk about synergies and I think that word is often used but in loose terms, to us, what it means is can you get one and one and somehow add that up to three? I think this is a good example of that. The development of the Canadian oil sands, as you know, has resulted in a significant increase in oil production.³¹ Our goal was to get the product to the United States market and, at the same time, find a way to find a new market for those refined products, which are the Canadian oil sands. To that end, we developed the Alberta Clipper Project, which is the one that is highlighted here in blue.³² It runs a course from west to east. Then we created a return line—that is the red one that works from east to west here—to return that refined product so it can be blended to help the transportation of the heavy crude.³³

So you can see here this is more or less a virtually closed system that really is focused on supporting growth of security and supply, but also growth for both Canada and the United States. And by the way, I included this photo here because it commemorates the point at which the Clipper Pipeline crosses the Canada-United States border.³⁴ I have this picture and it actually hangs on the back of my office wall. I just thought I would show you an illustration of the cooperative nature of the relationship.

²⁹ See generally *Top Trading Partners – Total Trade, Exports, Imports*, U.S. CENSUS BUREAU, <http://census.gov/foreign-trade/statistics/highlights/top/top1108yr.html> (last visited Nov. 4, 2011).

³⁰ See President Barack Obama, Remarks by the President on America's Energy Security at Georgetown University (Mar. 30, 2011), available at <http://whitehouse.gov/the-press-office/2011/03/30/remarks-president-americas-energy-security>; see also *Securing American Energy*, WHITE HOUSE, <http://whitehouse.gov/energy/securing-american-energy> (last visited Nov. 4, 2011).

³¹ See GOV'T OF CAN., *supra* note 7.

³² Monaco, *supra* note 5, at 10. See generally *Alberta Clipper and Southern Lights*, ENBRIDGE, <http://enbridge.com/Alberta-Clipper-and-Southern-Lights.aspx> (last visited Nov. 11, 2011).

³³ Monaco, *supra* note 5, at 10. See generally *Alberta Clipper and Southern Lights Project Map*, ENBRIDGE, http://enbridge.com/~media/Site%20Images/Projects/Maps/Clipper_Lights_Map.ashx (last visited Nov. 11, 2011).

³⁴ Monaco, *supra* note 5, at 10.

One of the most prolific plays in North America is the Bakken Oil Shale.³⁵ I am sure you have all heard of it. The Bakken has large reserves, somewhere in the order of six to seven billion barrels.³⁶ The crude is very high in quality, ultra light with very low sulfur, and that makes it a fantastic resource.³⁷ In 2010, we completed expansions on both sides of the border and we are now building a further 325,000 barrels a day at a cost of some \$600 million.³⁸ So this is a great example of how borders do not matter in our business. The winners here are going to be the United States and producers in that crude will now be able to get to market.

A key element of what we do is ensuring that there is enough pipeline capacity to reach United States markets. The red arrow here depicts our strategy to move barrels into the Gulf Coast.³⁹ That is to address a critical bottleneck in that there is a whole slew of crude coming into the cushioning area that needs to move out.

The green arrow shows our planned extensions here to the eastern markets.⁴⁰ Those markets are looking to diversify their sources of crude away from foreign supply. The lines to the West Coast shows a proposed gateway pipeline, which is going to open up access to the Asian markets.

So now let us move to some of the challenges that will need to be addressed as we work through the criticality of securing energy supply. One of the key challenges going forward, I believe, is a conflict between policy objectives and the realities of energy demand. We had a little bit of this conversation already in the last panel. Current and previous administrations have emphasized the need to reduce foreign oil, yet overall demand of oil continues to rise.⁴¹ United States oil basins are maturing, some areas actually still remain off limits, and we saw a good amount of that before.

Our objective is to reduce greenhouse gas emissions, yet many developing nations are going through explosive growth and industrialization of their economy. That will be a challenge.

The goal is to reduce consumption of fossil fuels but renewable energy still requires economic support. In addition, although significant advance-

³⁵ See generally *Enbridge Day 2010 Analyst Meeting – Toronto*, ENBRIDGE, http://www.enbridge.com/InvestorRelations/~media/Site%20Documents/Investor%20Relations/ENB_Day_TO-Transcript-2010-10-05.ashx (last visited Nov. 11, 2011).

³⁶ *Id.* at 14.

³⁷ *Id.*

³⁸ Monaco, *supra* note 5, at 11. See also *Bakken Pipeline Projects*, ENBRIDGE, <http://enbridge.com/BakkenPipelineProjects.aspx> (last visited Nov. 11, 2011).

³⁹ Monaco, *supra* note 5, at 12. See generally *Enbridge U.S. Operations*, ENBRIDGE, <http://www.enbridgeus.com/Main.aspx?id=206&tmi=117&tmt=4> (last visited Nov. 17, 2011).

⁴⁰ Monaco, *supra* note 5, at 12.

⁴¹ See generally FED. TRADE COMM’N, *GASOLINE PRICE CHANGES: THE DYNAMIC OF SUPPLY, DEMAND, AND COMPETITION* (2005), available at <http://www.ftc.gov/reports/gasprices05/050705gaspricesrpt.pdf> (last visited Jan. 29, 2012).

ments have been made on wind and solar, and we know this firsthand, the fact is that they cannot provide base load requirements because of their intermittent nature. This means that they need to be married up with other forms of fuel, such as natural gas, and require upgrades to the transmission grid.

A challenge to the security of economic energy supply is the opposition we see to energy development and I will say basically any kind of energy development. All forms of energy are under pressure. Oil and coal are relatively low cost but they are higher in emissions.⁴² Nuclear has zero emissions, but some question the industry's ability to manage the safety around it, as we have seen.⁴³ Natural gas is abundant and safe, and I am going to get into this a little bit more, but it is a fossil fuel, so there is opposition to it.⁴⁴ Wind is green but still experiences permitting issues, concerns over birds, and other issues like that.⁴⁵ Solar is also green but it is more costly right now by quite a margin and at this point it requires a lot more land because it has severely less energy density.⁴⁶

Traditional sources like crude oil from Canada are going to meet the increasing demand and security of supply issues. This slide here shows the forecast supply growth coming from Canada over the next decade,⁴⁷ and I am not sure if you can make out the numbers there, but essentially it goes from about two and a half million barrels per day to somewhere in the range of four.⁴⁸ The majority of that increase comes from the oil sands.⁴⁹ There is a high degree of confidence in this supply profile and the reason is that the oil sands are more akin to a manufacturing process than compared to an exploration process that you would see, for example, on the offshore Gulf Coast.⁵⁰

⁴² CONG. BUDGET OFFICE, PUB. NO. 2930, POLICY OPTIONS FOR REDUCING CO₂ EMISSIONS (2008).

⁴³ See generally Joel Kirkland, *Exelon-Constellation Deal Could Create 'Clean Energy' Giant*, N.Y. TIMES, Apr. 29, 2011, <http://www.nytimes.com/cwire/2011/04/29/29climatewire-exelon-constellation-deal-could-create-clean-83126.html?pagewanted=all>.

⁴⁴ See generally *Background*, NATURAL GAS, <http://www.naturalgas.org/overview/background.asp> (last visited Nov. 11, 2011).

⁴⁵ JEFFREY LOGAN & STAN MARK KAPLAN, CONG. RESEARCH SERV., RL34546, WIND POWER IN THE UNITED STATES: TECHNOLOGY, ECONOMIC, AND POLICY ISSUES (2008).

⁴⁶ *Delivering Energy, Renewable Energy, Solar*, ENBRIDGE, <http://enbridge.com/DeliveringEnergy/RenewableEnergy/Solar.aspx> (last visited Nov. 11, 2011).

⁴⁷ Monaco, *supra* note 5, at 15.

⁴⁸ *Id.*

⁴⁹ *The Board and Energy Development in Canada*, NAT'L ENERGY BD., <http://www.neb-one.gc.ca/clf-nsi/rpblctn/spchsndprsnntn/2008/nbnrgdvlpmntcnd/nbnrgdvlpmntcnd-eng.html> (last visited Nov. 11, 2011).

⁵⁰ See MARC HUMPHRIES ET AL., CONG. RESEARCH SERV., R40645, U.S. OFFSHORE OIL AND GAS RESOURCES: PROSPECTS AND PROCESSES (2010).

The key here is whether or not we are going to have significant enough pricing in order to support the development of the oil sands. Every price projection that I see certainly would indicate that the oil sands will be developed economically, especially given the improvements in technology. Now, the proximity of Canada's crude to the United States markets provides, I think, a real sustainable competitive advantage for North America. You have seen pipeline infrastructure on the previous maps there that show that they are well developed and they are getting crude to market.

Another problem lurking, though, is that Canadian producers are looking to diversify their markets by accessing Asia Pacific demand,⁵¹ and that is the one arrow I showed off the west coast of Canada.⁵² Now, that only makes sense because none of us in this room would want to be a price taker because we only have one market as Canada is at this point.

Now, there is another cloud looming, and the map of Florida was actually referred to a little while ago here. Another cloud that is hovering is that the oil sands probably has not done a good enough job in addressing public concerns, although in some cases that is based on what, I think, is sensationalism and playing loose with the facts. For example, you have heard opponents describe the oil sands as the size of Florida.⁵³ True, but in fact the development area that we are talking about is only two percent of the size of Florida.⁵⁴

Equally important, mining accounts for only about half the production,⁵⁵ whereas other forms of production, in my view at least, are less benign. Another misconception is that the oil sands generate vastly higher emissions. In fact, when you look at the emissions from the plant all the way through pipe, oil sands are only about six percent more intensive than the average United States crude and very similar in fact, and in some cases, lower than heavy crudes from California and Venezuela.⁵⁶ We need to remember that the vast

⁵¹ *Current Projects, North American Natural Gas Liquids Supply*, CAN. ENERGY RESEARCH INST., <http://www.ceri.ca/index.php/current-research> (last visited Nov. 17, 2011).

⁵² Monaco, *supra* note 5, at 12. See generally *Enbridge Northern Gateway Pipelines, Project Info*, ENBRIDGE, <http://www.northerngateway.ca/project-info/about-us> (last visited Nov. 11, 2011).

⁵³ Daniel Schom, *The Oil Sands of Alberta*, CBS NEWS (Feb. 11, 2009, 6:51 PM), <http://www.cbsnews.com/stories/2006/01/20/60minutes/main1225184.shtml>.

⁵⁴ See generally *Canadian Oil Sands*, <http://www.cdnoilsands.com/> (last visited Nov. 11, 2011); see also *Energy, Facts and Statistics*, GOV'T OF ALTA., <http://www.energy.alberta.ca/OilSands/791.asp> (last visited Nov. 11, 2011).

⁵⁵ GOV'T OF ALTA., *supra* note 54.

⁵⁶ See generally *Oil Sands, Greenhouse Gases, and US Oil Supply: Getting the Numbers Right*, IHS CERA (2010), http://www2.ihs cera.com/docs/Oil_Sands_Energy_Dialogue_0810.pdf.

majority of emissions, about eighty percent, are actually generated by end-use consumption.⁵⁷ So that is really the area that we need to focus on.

Danielle is right that there is still more that needs to be done.⁵⁸ I fully agree with that comment and the industry, I think, has in fairness made progress. Green house gas emissions associated with every barrel of oil sands has been reduced by thirty-nine percent since 1990.⁵⁹ More than eighty-five percent of the water used in the oil sands is now recycled, and that water is actually not fresh water but from lower aquifers under the formations.⁶⁰

In terms of tailings that were referred to, technology advancements are being made and we actually saw the first reclamation of that happen back in September of last year.⁶¹ Progress we heard on sequestration has been made as well. The Government of Alberta is actually going to invest \$2 billion to further develop that, but let us not kid ourselves here.⁶² Carbon capture and sequestration at this point is not economic unless we see much higher imputed costs of carbon.

In addition to communication around facts, there are other important factors that need to be considered in this whole issue about where you get your crude. The quality of regulatory oversight in Canada, I feel, is exceptionally strong and we have lived through it for a number of years, including stringent environmental community and First Nations processes.⁶³ But I think perhaps the most important point of all is that crude oil and other forms of energy supplied by Canada come with a shared set of values with the United States. That means human rights, democracy, rule of law, open markets, and, of course, a focus on the environment.

I want to spend a little bit of time on natural gas. This slide really illustrates how the story for natural gas has changed dramatically in just four years.⁶⁴ Now, four years is the term of a Presidential term but it is not very

⁵⁷ *Environmental Management of Alberta's Oil Sands*, GOV'T OF ALTA., <http://environment.gov.ab.ca/info/library/8042.pdf> (last visited Jan. 5, 2012).

⁵⁸ *Danielle Droitsch—Biography*, PEMBINA INST., <http://www.pembina.org/contact/219> (last visited Jan. 18, 2012).

⁵⁹ GOV'T OF ALTA., *supra* note 54.

⁶⁰ *Id.*

⁶¹ News Release, Suncor Energy, Suncor Energy Completes Surface Reclamation of First Tailings Pond (Sept. 23, 2010), *available at* <http://www.suncor.com/en/newsroom/2418.aspx?id=1324312>.

⁶² *See Carbon Capture and Storage, Climate Change*, GOV'T OF CAN., <http://climatechange.gc.ca/default.asp?lang=En&n=D22D143E-1> (last visited Nov. 17, 2011).

⁶³ *See generally About First Nations Summit*, FIRST NATIONS SUMMIT, <http://www.fns.bc.ca/about/about.htm> (last visited Nov. 11, 2011); *see also The World Needs Energy*, CAN. ASS'N OF PETROLEUM PRODUCERS, <http://www.capp.ca/environmentCommunity/Climate/Pages/WorldEnergy.aspx#B7Xi3rAnaMdb> (last visited Nov. 11, 2011).

⁶⁴ Monaco, *supra* note 5, at 17. *See generally Investor Relations*, ENBRIDGE,

long in the energy business. The black line that you see here shows the supply outlook that we had for gas back in 2006.⁶⁵ At the same time, we were projecting a flat supply of about seventy billion cubic feet (“bcf”) per day, and that assumed Alaska gas was coming in, as well as some liquefied natural gas imports.⁶⁶ We now see gas reaching ninety bcf per day predominantly because of the shale contribution with no contribution from Alaska during the period you see here.⁶⁷ In fact, what you see now is the industry considering actually exporting natural gas off the Gulf Coast as well as off the west coast of Canada.⁶⁸ So this has been nothing short, I think, of a remarkable turn around. A key part of that has to do with the improvements in technology, and particularly on the drilling side, which makes it economic to drill many gas reservoirs at a price of gas in the range of four to five dollars.⁶⁹ That is exactly why prices are where they are today.

The importance of natural gas, I think, in our future cannot be over emphasized. We have heard some comments around this being a transitional fuel and some uncertainty around where it is going to fit. In my view, natural gas is really going to be a linchpin of energy security in North America. The advantages of natural gas are very clear and compelling. North American reserves are massive and the abundance of supply makes gas cost-effective against other fuels.⁷⁰ Natural gas is very responsive to demand. I like to think of it as being able to turn on the drilling tap at will in order to respond to supply situations and demand.

Many prolific shale gas plays are very rich in natural gas liquids, which provide a very important source of value. The cost effectiveness of those products allows both Canada and the United States to be very competitive on the global scale as far as exporting feedstock for petro-chemical use that pro-

<http://www.enbridge.com/InvestorRelations/~media/Site%20Documents/Investor%20Relations/Gas%20-%20Enbridge%20Day%202010%20FINAL.ashx> (last visited Dec. 14, 2011).

⁶⁵ Monaco, *supra* note 5, at 17.

⁶⁶ *Id.* See generally 2007 Corporate Social Responsibility Report, Performance in 2006, ENBRIDGE, <http://csr.enbridge.com/csr2007/environmental-performance/climate-change/performance-in-2006/> (last visited Dec. 14, 2011).

⁶⁷ Monaco, *supra* note 5, at 17. See generally AMERICA’S NATURAL GAS ALLIANCE, THE ECONOMIC AND EMPLOYMENT CONTRIBUTIONS OF SHALE GAS IN THE UNITED STATES 10 (Dec. 2011), available at http://www.energyindepth.org/wp-content/uploads/2011/12/Shale-Gas-Economic-Impact-Dec-2011_EMB1.pdf.

⁶⁸ See *Enbridge Says it is Joining LNG Export Rush*, NORTHWEST COAST ENERGY NEWS (Oct. 4, 2011), <http://nwcoastenergynews.com/2011/10/04/138/enbridge-joining-lng-export-rush-reuters/>.

⁶⁹ See *Natural Gas Prices*, ENBRIDGE, https://www.enbridgegas.com/businesses/assets/docs/CG%20014%20619_Natural%20Gas%20Prices_OCT11.pdf (last visited Dec. 14, 2011); see also Al Monaco, *Gas Transportation and International*, ENBRIDGE, <http://www.enbridge.com/InvestorRelations/~media/Site%20Documents/Investor%20Relations/Gas%20-%20Enbridge%20Day%202010%20FINAL.ashx> (last visited Dec. 14, 2011).

⁷⁰ ENBRIDGE, *supra* note 69.

duces plastics and other products. So in a way we are already exporting natural gas.

Finally, natural gas is not green, and it is not clean per se, but it is much cleaner to burn than other fuels.⁷¹

Now, one last point, at the risk of belaboring this issue, if there is one thing that we know about the economies in our countries, Canada and the United States, is that electricity demand is going to continue to grow. As was noted, a key source of supply for electric power generation in the coming years will be natural gas. You can see by the white line here with the uptick that there is going to be a significant increase in gas consumption for electricity.⁷² But, and I think this may have been mentioned as well, there is another broader point here with this chart which is that we are going to need all of the sources of energy to meet the electricity demand. We are not going to have the luxury of being able to pick and choose what we want. There is a lot of opposition to this fuel or that fuel, but the reality is we need it all, and that includes renewables to power our economy down the road and maintain our standard of living in the future.

So let me summarize quickly here with a few key take-aways.⁷³

Energy plays, as you have heard, a significant role in our lives, and I think it is a pillar of the Canada-United States trading relationship. Crude oil is going to be a key driver of both Canada's and the United States' economies. For all the reasons I mentioned, Canada plays a significant role in stable and reliable supply. Enbridge, our company, plays an important part of that in making sure supply gets to the market to support refinery production and so forth.

Gas is going to be critical to energy fuel, our economies in the future, and it is not, in my view, just a transitional fuel. North America is very well developed and endowed with natural gas.⁷⁴ I think we need to start looking at natural gas as a strategic fuel. As we transition to a less carbon-intensive economy, our energy supply and renewable energy must grow as well to help meet that demand.

On the policy side, we all know that a number of groups that have varied interests have called for different energy strategies for Canada and the United States. Policy gaps aside, and there are a lot of policy experts already in this room, I would suggest that any Canadian-United States or continental ap-

⁷¹ See Tom Zeller, Jr., *Natural Gas: It's Not Easy Being Green*, N.Y. TIMES (Feb. 1, 2011, 12:12 PM), <http://green.blogs.nytimes.com/2011/02/01/natural-gas-its-not-easy-being-green/>.

⁷² Monaco, *supra* note 5, at 19.

⁷³ Monaco, *supra* note 5, at 20.

⁷⁴ See Rick Van Schoik, *North American transborder environmental influences and their impacts*, FOCAL, <http://www.focal.ca/publications/focalpoint/392-february-2011-rick-van-schoik> (last visited Jan. 5, 2012).

proaches that we take emphasize certainty and responsiveness. By certainty, I mean we need consistency and clarity from regulators and governments so that we can make investment decisions to move forward.

Remember, one rule in our business is that certainty encourages investments, but if we are in an uncertain environment, we certainly are discouraged from investing. From an industry perspective, decisions by regulators and others on existing and potential infrastructure should be driven by a balanced and timely assessment of the benefits and risks of a given project.

From a continental perspective, though, uncertainty poses significant barriers to our energy relationship and could risk the economic security and supply security in North America. A significant part of the onus of successful energy strategy rests with people like myself and others in the energy industry. We need to show leadership in terms of climate change and greenhouse gas emissions. For example, although we are not a major emitter, we are proud to say that we are committed to stabilizing our own environmental footprint. In fact, in 2009 our own direct emissions were twenty-three percent below 1990 levels and that happened at a time when crude oil production actually increased by forty-five percent.⁷⁵ We also implemented a recent neutral footprint strategy, which basically says that any new project that we bring forward will be environmentally neutral.⁷⁶

Finally, I think the industry, as I mentioned before, needs to do a better job of telling individuals, families, and communities about the connection between energy and our standard of living. We seem to miss the connection between what it takes to produce energy and the gas pedal of our car, our computer, our air conditioners, and so forth. We need to take a step back in working with governments and others in building a better base of energy literacy.

Let me conclude here and I cannot conclude without showing a picture of pipeline construction.⁷⁷ If you were in the pipeline business, this is what you do. So this is what I am going to end with. Let me conclude, then, by saying that the future growth and our standard of living is dependent on the strength of the Canada-United States energy trade relationship.

Let us not underestimate its impact and let us capitalize on the relationship that we have. I think, in a nutshell, going back to the earlier cartoon, the

⁷⁵ Monaco, *supra* note 5, at 19, and *Oil and Energy: What about carbon emissions?*, ENBRIDGE NORTHERN GATEWAY PIPELINES (Dec. 19, 2011), <http://www.northerngateway.ca/news-and-media/northern-gateway-blogs/oil-and-energy/what-about-carbon-emissions/>.

⁷⁶ See *Corporate Social Responsibility, Neutral Footprint*, ENBRIDGE, <http://www.enbridge.com/AboutEnbridge/CorporateSocialResponsibility/NeutralFootprint.aspx> (last visited Dec. 14, 2011).

⁷⁷ Monaco, *supra* note 5, at 21.

mouse and the elephant really need to cooperate on energy.⁷⁸ I really thank you for your time and I am willing to take questions.

DISCUSSION FOLLOWING KEYNOTE LUNCHEON ADDRESS I BY
AL MONACO

MR. SPENCE: Any questions? I think you have answered all their questions.

MR. PETERSON: I will be happy to ask you. You mentioned finding alternative markets but you passed over it very quickly. Would you like to expand on that?

MR. MONACO: I think the basis for that statement is that in order for producers to maximize the value of their resource, we need to have access to them for other ways to get the crude out. The simple premise is that if you only have access to one market, then that is going to constrain your ability to get the maximum price. So what we are thinking is that there is probably a two- or three-pronged strategy to that. A lot of it has to do with further movement of crude oil into the United States markets.

Right now you have got a bit of a constraint in cushioning and other areas, but, as I said, in order to maximize price you have got to push it further south. In addition to that, if you look at demand in a global sense, I would say a good chunk of demand is going to take place in Asia Pacific. The Asia Pacific region is expected to grow by about three and a half percent per year in terms of crude oil consumption growth.⁷⁹ That is obviously a market that Canadian producers are looking at getting into and, as I said, that will give them an alternative and hopefully maximize price for them.

MR. PETERSON: Thank you.

MR. ROBINSON: On precisely that point, I am Michael Robinson from Fasken Martineau in Toronto. This is a lawyer's question, so you may not want to answer it. Somebody else may. There is an interesting section in the North American Free Trade Agreement, Number 605A, which guarantees with a small "g" a certain proportionality in energy exports to the United States in perpetuity, as long as that treaty is around.⁸⁰ So you build a Northern Gateway, the Asian market is booming like mad, they want to buy it. We cannot sell it if it violates the proportionality obligations to the United States, as I read that section. Have you considered that at all? Does that enter into the economics of a Northern Gateway?

⁷⁸ *Id.* at 4.

⁷⁹ KANG WU ET AL., OIL IN ASIA AND THE PACIFIC: PRODUCTION, CONSUMPTION, IMPORTS, AND POLICY OPTIONS, EAST WEST CENTER 3 (Aug. 2008).

⁸⁰ North American Free Trade Agreement, U.S.-Can.-Mex., Dec. 17, 1992, 32 I.L.M. 289.

MR. MONACO: For sure we have looked at that, at the agreement and the provisions of that, and, as far as I am aware, there is nothing to preclude producers from accessing alternative markets. Once again, it is based on the principle of being able to maximize price. In this case, I do not think the North American Free Trade Agreement ever intended for Canadian crude to be mispriced relative to the world market. That would be my view on it.

MR. SCOTT: My name is Ryan Scott. I am with Consumer Energy Alliance. Is there anything holding Canadians back or Canada in general back from refining these products in the country? There has been some talk about the role of Canada, the Keystone XL pipeline has not happened, or just the way things are now. Why do you not refine it, make more money, and sell it at a higher price?

MR. MONACO: That is an excellent question. I think in Canada there is always a view that it would be a good idea to certainly refine crude or upgrade crude even, which is sort of halfway there, in that it would retain the value in Canada. The reality is that there is excess refining capacity right now in the United States and the difference in cost between creating a new upgrading facility or refinery in Canada versus utilizing existing capacity in the United States is quite substantial. It is about a five-to-one margin. So I think it is a good objective in order to increase value within the country from the product but the reality is it is much more cost-effective to use existing capacity.

MR. BLANCHARD: Jim Blanchard again, for the record. You mentioned the importance of regulatory certainty, and that would be both in the United States and Canada. Given the other thoughts, though, in terms of the title of our Conference, the question is, do we need or should we have a Canada-United States common approach to climate change? Any thoughts on that?

MR. MONACO: I think the obvious response would be that we should have the same policy, and I think our government has espoused the view that we would follow what the United States proposes to do. I do think we have to think very carefully about that, though, because our economies are different. Also, I think our policy on climate change needs to be focused on our specific situation.

So I would say, Governor, that I think we need to take a little bit more time and figure out whether or not we need our own independent view on climate change initiatives.

MR. CRANE: David Crane. I want to come back to this issue of refining in Canada. From the Canadian perspective, it is very important and to an extent we are just hostage because some American investors happen to own some refineries which they would like to fill with our crude versus what is in our best interest.

Surely we could at least be making some kind of start to upgrading this resource in our own country. Otherwise, we are just like the Australians. We are digging stuff out of the ground, shipping it out of the country, and capturing minimum value out of it. It is not a very forward-looking policy for Canada.

MR. MONACO: I think that is principally the argument that supports our move for a Northern Gateway, which is to access the Asia Pacific market with enough pipeline capacity that would make a difference. I agree with the premise and that is what is behind Northern Gateway.

I do think, though, I would not necessarily overplay the—I think you said something like “minimal value.” I do think the crude is getting decent value at the moment. The question is, is it getting maximum value? Our analysis shows that with the Northern Gateway, the net back price to western Canadian producers would be increased by somewhere in the order of two to three dollars a barrel.⁸¹ It does not sound like much, but remember that this works on marginal pricing, so that if you access a new market that has a higher price, that higher price applies to all the barrels. When you look at all the math behind that, it is somewhere in the order of \$28 billion of additional revenue to western Canadian producers from access to that new market.⁸² That is part of what is behind the interest in that project.

I will also say that the impact on Canada as a whole of doing a project like Gateway comes with huge spin-off benefits, both direct and indirect, and huge improvements in tax revenues both locally and nationally.⁸³ The gross domestic product effect that we see from Gateway over the next two decades is somewhere in the order of \$270 billion, so from a national perspective, I think it makes sense as well.⁸⁴

MR. McILROY: My name is Jim McIlroy. You showed a chart showing the reserves of the oil sands and I have a couple of quick questions. Are you having to dig deeper to get at it or spend more to bring it out? And, secondly, is the quality of the bitumen as you continue to explore, is it going down and, therefore, your costs relatively are rising?

MR. MONACO: So your first question was on cost, right?

MR. McILROY: Yes. Do you have to dig deeper? Have you taken basically all the low hanging fruit at this point and now it is going to get a lot more expensive?

⁸¹ See *The Need for Diversifying Markets has Never Been Clearer*, ENBRIDGE NORTHERN GATEWAY PIPELINES (May 27, 2011), <http://blog.northerngateway.ca/category/pipeline/>.

⁸² *Three Pipeline Builders Race to Reach New Markets*, ALTA. OIL (June 1, 2011), <http://www.albertaoilmagazine.com/2011/06/dire-straits/>.

⁸³ See *Overview of Eastern and Atlantic Canada's Petroleum Industry and Economic Impacts of Offshore Atlantic Projects*, CAN. ENERGY RESEARCH INST. (Nov. 2011).

⁸⁴ ALTA. OIL, *supra* note 82.

MR. MONACO: I would not describe it that way. I think the mining extraction process is still at the point where it is extending the current zone, if you will. Right now that zone is down to two hundred meters.⁸⁵ Beyond that, other types of extraction methodologies are used.⁸⁶ A steam-assisted drainage is probably the most prominent one.⁸⁷

I would say that, overall, the finding and development cost of oil sands is somewhere in the order of fifty to sixty dollars per barrel on a full-cycle basis.⁸⁸ That includes the return of capital, return on capital, all the costs, and so forth. So you probably need somewhere in the order of about fifty, sixty, sixty-five dollars range.⁸⁹

If anything, we have seen the costs become more efficient going forward here simply because of the improvements in the technology. So I do not see a significant increase in costs at all from oil sands development because of having to go deeper, if you will. On the quality side, once again, I think the crude is very homogenous, and I think until we sort of go beyond the barriers of those reserves there, I think the quality is not being degraded substantially at this point.

MR. McILROY: Thank you.

MR. SPENCE: Thank you, Al.

⁸⁵ See NAT'L ENERGY BD., CANADA'S OIL SANDS: OPPORTUNITIES AND CHALLENGES TO 2015 (May 2004).

⁸⁶ *Id.* at 9-20.

⁸⁷ *Id.* at 15.

⁸⁸ *Id.* at 8.

⁸⁹ *Id.*

